

WHAT IS CLAIMED IS:

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1. A method of manufacturing an open type polyimide molding product which comprises

bringing a polyimide film into an intimate contact with a molding die having a concave molding surface so as to tightly close the open end thereof, bending to deform the polyimide film under contactless heating only by a pressure difference of gas, and depressurizing a space on the side of the molding die and pressurizing a space on the opposite side relative to the polyimide film for providing the pressure difference at least in the final stage of the bending deformation and bringing the film into an intimate contact with the concave molding surface.

2. A method of manufacturing an open type polyimide molding product as defined in claim 1, wherein a pressing die is disposed to the open end of the molding die so as to seize the polyimide film, and the polyimide film is heated in a contactless manner by disposing a heating portion to the pressing die and/or the molding die thereby radiating radiation heat and/or releasing a heating gas from the pressing die.

3. A method of manufacturing an open type polyimide molding product as defined in claim 2, wherein a porous metal or a number of pores are disposed to the concave molding surface of the molding die and the inner surface of the pressing die, and the space on the side of the molding die is depressurized and/or the space on the side of the pressing die is pressurized by way of the porous metal or the pores.

4. A method of manufacturing an open type polyimide molding product as defined in claim 2 or 3, wherein a cooling portion is disposed to

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the molding die and/or the pressing die, and the shape of the polyimide film after molding is fixed by the cooling effect of the cooling portion and/or releasing the cooling gas from the pressing die.

5. A substrate for a reflector for use in illumination equipments manufactured from an open type polyimide molding product obtained by the manufacturing method as defined in any one of claims 1 to 3.

6. A substrate for a reflector for use in illumination equipments manufactured from an open type polyimide molding product obtained by the manufacturing method as defined in claim 4.

7. An apparatus for manufacturing an open type polyimide molding product for practicing the method as defined in any one of claims 1 to 3, wherein a molding section is constituted with a molding die having a concave molding surface and a pressing die in press contact with an open end of the molding die, the molding die is connected with a negative pressure source and the pressing die is connected with a pressurization source.

8. An apparatus for manufacturing an open type polyimide molding product for practicing the method as defined in claim 4, wherein the molding section comprises a molding die having a concave molding surface and a pressing die in press contact with an open end of the molding die, the molding die is connected with a negative pressure source and the pressing die is connected with a pressurization source.

9. An apparatus for manufacturing an open type polyimide molding product as defined in claim 7, wherein a film supply mechanism for supplying and setting a polyimide film to the molding section is disposed.

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10. An apparatus for manufacturing an open type polyimide molding product as defined in claim 8, wherein a film supply mechanism for supplying and setting a polyimide film to the molding section is disposed.

11. An apparatus for manufacturing an open type polyimide molding product as defined in claim 7, wherein a molding product take out mechanism is disposed for taking out a molding product from the molding section.

12. An apparatus for manufacturing an open type polyimide molding product as defined in claim 8, wherein a molding product take out mechanism is disposed for taking out a molding product from the molding section.